UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/601,995
Filing Date: June 23, 2003
Appellant(s): DETTINGER ET AL.

Gero G. McClellan
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 16, 2009 appealing from the

Office action mailed June 17, 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct, <u>except for one WITHDRAWN REJECTION noted directly below</u>.

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. 35 U.S.C. 101 rejection on claim 61 as being nonstatutory subject matter.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 2002/0073066 A1	Coutts et al	6-2002
US 2003/0110087 A1	Rao et al	6-2003
US 4,989,141	Lyons et al	1-1991

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 101

1.   Claims 70-74 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 70-74 are directed to a series of steps. In order for a series of steps to be considered a proper process under § 101, a claimed process must either: (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials). *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). Thus, to qualify as patent eligible, these processes must positively recite the other statutory class to which it is tied (e.g., by identifying the apparatus that accomplishes the method steps), or positively recite the subject matter that is being transformed (e.g., by identifying the product or material that is changed to a different state).   Claims 70-74 identify neither the apparatus performing the recited steps nor any transformation of underlying materials, and accordingly, are directed to non-statutory subject matter. Specifically, displaying an interface on an output device is considered an insignificant extra solution activity, in terms of positively reciting a machine that executes process steps.

Claim Rejections - 35 USC § 103

2.   Claims 1-37, 46-50 and 55-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coutts et al (US 2002/0073066 A1), in view of Rao et al (US 2003/0110087 A1).

Claims 1 and 8:

Coutts, as shown, discloses the following limitations:

- *providing an abstract model for logically defining abstract operations to access the data, the abstract model comprising: a plurality of logical fields; (See at least ¶0020-¶0022, ¶0029)*

- *(the abstract model comprising:) a mapping rule for each of the plurality of logical fields, which map the plurality of logical fields to physical entities of the data; (See at least ¶0029)*

- *Wherein each mapping rule comprises an access method which is executed to retrieve a respective physical field of the physical entities of the data (See at least ¶0037-¶0038)*

- *(the abstract model comprising:) a fee schedule for each of the plurality of logical fields, (See at least ¶0029, ¶0038, and ¶0124)*

- *Executing a fee calculator on a computer processor to calculate, based on the fee schedules, a fee to be charged for accessing the data (See at least ¶0038 and ¶0120)*

With regard to the first limitation listed above, Coutts discloses, in at least the paragraphs cited, that "a third party is charged a fee for accessing data accounts."

With regard to the second limitation, Coutts discloses, in at least ¶0029, that "each data account includes data associated with an individual and access rights selected by an individual."

With regard to the third limitation, Coutts teaches an "access method" by disclosing that there is a "business agent" involved in accessing the data related to each data account. When Coutts discloses that "the business agent may then interact with the broker agent and/or directly with one or more consumer agents" in the process of acquiring data, Coutts is teaching that the mapping rule between the data accounts and the associated data involve this access method involving business agents, broker agents, and consumer agents.

With regard to the fourth limitation, Coutts discloses that "a third party is charged a fee for accessing data accounts." Coutts also discloses that such access could incur a payment of "a fee per query."

With regard to the fifth limitation, Coutts discloses, in at least ¶0038 and ¶0120, that fee is charged in bringing the accessed information to the user. With specific regard to the *"fee calculator,"* Coutts does not explicitly disclose that there is *calculation* of the fee being done before charging the fee. However, it would have been obvious to one of ordinary skill in the art that fees would be *calculated* before being presented to the user as the amount being charged, because accessing of multiple data accounts through multiple queries could be involved in Coutts' operation, in which case the total fee could be a combination of a plurality of smaller fees.

Coutts does not explicitly disclose the following limitations:

- *wherein each fee schedule for a given logical field defines a fee to be charged when the given logical field is involved in an abstract operation to access a physical entity corresponding to the given logical field.* (See at least ¶0028 and ¶0071)

Coutts does not explicitly disclose that such fee schedule is set up in such a way that "*each fee schedule for a given logical field defines a fee to be charged.*" However, Rao discloses that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claim 8, this claim encompasses substantially the same scope as claim 1. Accordingly, claim 8 is rejected in substantially the same manner as claim 1, as described above.

Claims 12 and 29:

Coutts, as shown, discloses the following limitations:;

- *receiving instructions to perform an operation for accessing the data;* (See at least ¶0020-¶0022, ¶0029, and ¶0037)

- *performing the operation;* (See at least ¶0029, ¶0038, and ¶0124)

With regard to the first and second limitations listed above, Coutts discloses, in at least the paragraphs cited, that a third party could access data accounts in exchange for payment of certain fees,

Coutts does not explicitly disclose the following limitations. However, Rao, as shown, does:

- *determining field-specific fees for each of a plurality of the physical fields accessed by the operation;* (See at least ¶0028 and ¶0071)

- *calculating, by operation of a computer processor, a total fee to be charged to a user for the operation* (See at least ¶0028 and ¶0071)

Coutts does not explicitly disclose that such fee schedule is set up as a summed total of *"field-specific fees."* However, Rao discloses that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claim 29, this claim encompasses substantially the same scope as claim 12. Accordingly, claim 29 is rejected in substantially the same manner as claim 12, as described above.

Claim 46:

Coutts, as shown, discloses the following limitations:

- *providing an abstract model for defining abstract operation specifications logically describing operations to access the data, the abstract model comprising: (a) a plurality of logical fields;* (See at least ¶0020-¶0022, ¶0029)

- *(the abstract model comprising:) (b) a mapping rule for each of the plurality of logical fields, which map each of the plurality of logical fields to at least one of the physical entities of the data;* (See at least ¶0029)

- *Wherein each mapping rule comprises an access method which is executed to retrieve a respective physical field of the physical entities of the data* (See at least ¶0037-¶0038)

- *(the abstract model comprising:) (c) a plurality of model entity definitions, each comprising at least one logical field corresponding to a physical field of a physical entity;* (See at least ¶0029)

- *and providing a run-time component to transform, according to the abstract model, abstract operation specifications into physical operation specifications consistent with the physical data, wherein each abstract operation specification includes at least one user-selected model entity definitions of the plurality of model entity definitions.* (See at least ¶0029 and ¶0114-¶0120)

- *executing a fee calculator on a computer processor to calculate, based on the fee schedules, a fee to be charged for accessing the data* (See at least ¶0038 and ¶0120)

With regard to the first limitation listed above, Coutts discloses, in at least the paragraphs cited, that "a third party is charged a fee for accessing data accounts."

With regard to the second and fourth limitations, Coutts discloses, in at least ¶0029, that "each data account includes data associated with an individual and access rights selected by an individual." Here, the identifications of the data accounts are functionally equivalent to the *"model entity definitions."*

With regard to the third limitation, Coutts teaches an "access method" by disclosing that there is a "business agent" involved in accessing the data related to each data account. When Coutts discloses that "the business agent may then interact with the broker agent and/or directly with one or more consumer agents" in the process of acquiring data, Coutts is teaching that the mapping rule between the data accounts and the associated data involve this access method involving business agents, broker agents, and consumer agents.

With regard to the fifth limitation, Coutts discloses that "each data account includes data associated with an individual and access rights selected by the individual." Here, Coutts teaches that each data account has an associated data, which functionally equates to "physical data."

With regard to "*abstract operation specifications*" and "*physical operation specifications,*" Coutts teaches a "data sales interface" which is for "allowing a third party to query preselected data accounts; whereby a third party is charged a fee for accessing data accounts." Here, the third party's query for the data accounts is functionally equivalent to the *abstract operation specifications*, and the subsequent physical access to the corresponding data is functionally equivalent to the *physical operation specifications*.

With regard to the sixth limitation, Coutts discloses, in at least ¶0038 and ¶0120, that fee is charged in bringing the accessed information to the user. With specific regard to the "*fee calculator,*" Coutts does not explicitly disclose that there is *calculation* of the fee being done before charging the fee. However, it would have been obvious to one of ordinary skill in the art that fees would be *calculated* before being presented to the user as the amount being charged, because accessing of multiple data accounts through multiple queries could be involved in Coutts' operation, in which case the total fee could be a combination of a plurality of smaller fees.

Coutts does not explicitly disclose the following limitations:

Coutts does not explicitly disclose the following limitation. However, Rao, as shown, does:

- *(the abstract model comprising:) (d) model entity fee schedules for each of the plurality of model entity definitions, wherein the fee schedules each specify a fee for accessing a physical field of the corresponding model entity definition;* (See at least ¶0028 and ¶0071)

Coutts does not explicitly disclose that such fee schedule is set up in such a way that "*each of the plurality of model entity definitions*" specifies an individual fee. However, Rao discloses that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

Claims 59 and 61:

Coutts, as shown, discloses the following limitations:

- *an abstract model for defining abstract queries logically describing operations to query the data, the abstract model comprising: (i) a plurality of logical fields;* (See at least ¶0020-¶0022, ¶0029)

- *(the abstract model comprising:)(ii) a mapping rule for each of the plurality of logical fields, which map the plurality of logical fields to physical entities of the data;* (See at least ¶0029)

- *Wherein each mapping rule comprises an access method which is executed to retrieve a respective physical field of the physical entities of the data* (See at least ¶0037-¶0038)

- *a run-time component configured with transformation instructions to transform an abstract query, comprising logical fields selected from the plurality of logical fields, into a physical*

query consistent with the physical data; and a fee calculator configured to calculate a fee

for executing physical queries based on the fee schedules. (See at least ¶0029, ¶0037-

¶0038, and ¶0114-¶0120)

With regard to the first limitation listed above, Coutts discloses, in at least the paragraphs cited,

that "a third party is charged a fee for accessing data accounts."

With regard to the second limitation, Coutts discloses, in at least ¶0029, that "each data account

includes data associated with an individual and access rights selected by an individual."

With regard to the third limitation, Coutts teaches an "access method" by disclosing that there is a

"business agent" involved in accessing the data related to each data account. When Coutts

discloses that "the business agent may then interact with the broker agent and/or directly with one

or more consumer agents" in the process of acquiring data, Coutts is teaching that the mapping

rule between the data accounts and the associated data involve this access method involving

business agents, broker agents, and consumer agents.

With regard to the fourth limitation, Coutts discloses that "A third party may have its own agent

(hereinafter referred to as a business agent) so that the third party can instruct the broker agent

about the number and type of individuals that the third party would like to query. The business

agent may then interact with the broker agent," (See at least ¶0037-¶0038) and the broker agent

would then retrieve the physical data and forward the data to the third party (See at least ¶0120).

Coutts further discloses, in at least ¶0038 and ¶0120, that fee is charged in bringing the accessed

information to the user. With specific regard to the *"fee calculator,"* Coutts does not explicitly

disclose that there is *calculation* of the fee being done before charging the fee. However, it would

have been obvious to one of ordinary skill in the art that fees would be *calculated* before being

presented to the user as the amount being charged, because accessing of multiple data accounts

through multiple queries could be involved in Coutts' operation, in which case the total fee could

be a combination of a plurality of smaller fees.

Coutts does not explicitly disclose the following limitation. However, Rao, as shown, does:

- *(the abstract model comprising:)(iii) a fee schedule for each of the plurality of logical fields;* (See at least ¶0028 and ¶0071)

Coutts does not explicitly disclose that such fee schedule is set up in such a way that *"each of the plurality of logical fields"* specifies an individual fee that may add up to the total fee. However, Rao discloses that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claim 61, this claim encompasses substantially the same scope as claim 59. Accordingly, claim 61 is rejected in substantially the same manner as claim 59, as described above.

Claims 64 and 70:

Coutts, as shown, discloses the following limitations:

- *receiving, via a user interface, user input comprising instructions for an operation for accessing the data selected fields of the plurality of the physical fields;* (See at least ¶0029 and ¶0117)
- *calculating, by a computer processor, a fee to be charged to a user for accessing the selected fields;* (See at least ¶0038 and ¶0120)
- *displaying the fee to the user via a user interface.* (See at least ¶0120)

With regard to the first limitation listed above, Coutts discloses, in at least ¶0029 and ¶0117, that a data sales interface is provided, and discusses an example of insurance company querying for various customer data via the data sales interface. In the example provided in at least ¶0117, Coutts discloses that such request and input could be done via web browser's interface.

With regard to the second and third limitations above, Coutts discloses, in at least the paragraphs cited, that that "Business agents may pay a fee per query posed so that if they want to find out further information they must pay a further fee." Coutts also discloses, in at least ¶0120, that the broker would provide the insurance company "with a charge for fulfilling the request." One skilled in the art would recognize that if payment is done on a per-query basis and additional query incurs further charging of fees, there is a *"calculating a fee to be charged"* clearly involved in order to charge the users all "query fees" and "further fees" incurred. With regard to the limitation *"displaying the fee to the user via a user interface,"* Coutts, in at least ¶0120, discloses that such providing of "a charge for fulfilling the request" could be done "via the company's Web browser."

Coutts does not explicitly disclose the following limitation. However, Rao, as shown, does:

- *determining field-specific fees for each of the selected fields;* (See at least ¶0028 and ¶0071)

Coutts does not explicitly disclose that such fee schedule is set up as *"field-specific fees for each of the selected fields."* However, Rao discloses that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claim 70, this claim encompasses substantially the same scope as claim 64. Accordingly, claim 70 is rejected in substantially the same manner as claim 64, as described above.

Claims 2, 16-17, 19, 23, 27, 33-34, 36, 49, 56-57, 67-68, and 72:

Coutts discloses the limitations of claim 1, which claim 2 depends upon. Coutts, as shown, also discloses the following limitation:

- *accessing the data according to an abstract operation comprising at least two of the plurality of logical fields*; (See at least ¶0116-¶0117)

Coutts discloses, in the example disclosed in at least ¶0116-¶0117, that there could be multiple (e.g. five hundred) data accounts that the third party could query.

Coutts does not specifically disclose the following limitations. However, Rao, as shown, does:

- *the fee to be charged is calculated based on separate fee schedules corresponding to each of the at least two of the plurality of logical fields.* (See at least ¶0028 and ¶0071)

While Coutts does not explicitly disclose that fee is generated according to *separate fee schedules corresponding to each of the at least two plurality of logical fields,* Rao, in at least ¶0028 and ¶0071, does. In at least ¶0028, Rao discloses "establishing a plurality of subscriptions to the geophysical database, each of the plurality of subscriptions including a respective fee for which a respective subscriber is provided access to the geophysical data." Rao further discloses, in at least ¶0071, that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have

performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claims 16-17, 19, 23, 27, 33-34, 36, 49, 56-57, 67-68, and 72, these claims encompass substantially the same scope as claim 2. Accordingly, claims 4, 16-17, 19, 23, 27, 33-34, 36, 49, 56-57, 67-68, and 72 are rejected in substantially the same manner as claim 2, as described above.

Claims 3:

Coutts, as shown, discloses the following limitations:

- *providing a run-time component configured with transformation instructions to transform each abstract operation, comprising logical fields selected from the plurality of logical fields, into a physical operation consistent with the physical data* (See at least ¶0029, ¶0037-¶0038, and ¶0114-¶0120)

Coutts discloses that "A third party may have its own agent (hereinafter referred to as a business agent) so that the third party can instruct the broker agent about the number and type of individuals that the third party would like to query. The business agent may then interact with the broker agent," (See at least ¶0037-¶0038) and the broker agent would then retrieve the physical data and forward the data to the third party (See at least ¶0120).

Claims 9, 22, and 24:

Coutts, as shown, discloses the following limitations:

- *transforming, according to the abstract model, abstract operation specifications into physical operation specifications consistent with the physical data, wherein each abstract*

operation specification includes at least one of the plurality of model entity definitions; (See at least ¶0037-¶0038, and ¶0120)

- *calculating, by executing the fee calculator, the fee to be charged for executing physical operations based on the fee schedules* (See at least ¶0038 and ¶0120)

With regard to the first limitation above, Coutts discloses that "A third party may have its own agent (hereinafter referred to as a business agent) so that the third party can instruct the broker agent about the number and type of individuals that the third party would like to query. The business agent may then interact with the broker agent," (See at least ¶0037-¶0038) and the broker agent would then retrieve the physical data and forward the data to the third party (See at least ¶0120).

With regard to the second limitation above, Coutts discloses, in at least ¶0038 and ¶0120, that fee is charged in bringing the accessed information to the user. With specific regard to the "*fee calculator,*" Coutts does not explicitly disclose that there is *calculation* of the fee being done before charging the fee. However, it would have been obvious to one of ordinary skill in the art that fees would be *calculated* before being presented to the user as the amount being charged, because accessing of multiple data accounts through multiple queries could be involved in Coutts' operation, in which case the total fee could be a combination of a plurality of smaller fees

As per claims 22 and 24, these claims encompass substantially the same scope as claim 9. Accordingly, claims 22 and 24 are rejected in substantially the same manner as claim 9, as described above.

Claims 4, 15, 21, 25, 32, 62, 66, 71, and 74:

Coutts, as shown, discloses the following limitations:

- *determining a per request fee for a first one of the at least two logical fields, wherein the per request fee is charged for each abstract operation involving the first one of the at least two logical fields;* (See at least ¶0037-¶0038)

- *and determining a per item fee for a second one of the at least two logical fields, wherein the per item fee is charged for each instance of the second one of the at least two logical fields involved in a given abstract operation.* (See at least ¶0037-¶0038)

With regard to the first limitation listed above, Coutts discloses that "business agents may pay a fee per query posed so that if they want to find out further information they must pay a further fee, rather than being able to acquire their own copy of the data on which they could execute multiple queries free of charge." Here, Coutts is teaching that for each accessing operation which involves certain data accounts, the business agents may have to pay a fee on a per-request (per-query) basis.

With regard to the second limitation listed above, Coutts teaches the "*per item fee*" through the same disclosure ("business agents may pay a fee per query posed so that if they want to find out further information they must pay a further fee, rather than being able to acquire their own copy of the data on which they could execute multiple queries free of charge.") The Examiner notes that Coutts teaches the "*per item fee*" because through the disclosure (i.e. "if they want to find out further information they must pay a further fee, rather than being able to acquire their own copy"), because Coutts teaches that they would allow only one instance of data access in each query. Hence, in Coutts' case, *per item fee* of a data account is actually equivalent to the *per request fee* of a data account.

Coutts does not teach the following limitation. However, Rao, as shown, does:

- *accessing a corresponding fee schedule for each of the at least two logical fields;* (See at least ¶0028 and ¶0071)

While Coutts does not explicitly disclose that fee is generated according to *corresponding fee schedule for each of the at least two logical fields,* Rao, in at least ¶0028 and ¶0071, does. In at

least ¶0028, Rao discloses "establishing a plurality of subscriptions to the geophysical database, each of the plurality of subscriptions including a respective fee for which a respective subscriber is provided access to the geophysical data." Rao further discloses, in at least ¶0071, that "pricing structures can include different prices for access to different types of data," clearly teaching that as a subscriber accesses different data of different types, each type of data would incur its own corresponding fee in order to form the overall price to be charged to the subscriber.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claims 15, 21, 25, 32, 62, 66, 71, and 74, these claims encompass substantially the same scope as claim 4. Accordingly, claims 15, 21, 25, 32, 62, 66, 71, and 74 are rejected in substantially the same manner as claim 4, as described above.

Claims 5 and 26:

Coutts teaches some limitations of claim 4, which claim 5 depends upon. Coutts does not specifically disclose the following limitations. However, Rao, as shown, does:

- *multiplying the per item fee by a number of instances of the second one of the at least two logical fields to determine a product, and summing the product and the per request fee to determine the fee to be charged.* (See at least ¶0019-¶0020 and ¶0070)

Rao, in at least ¶0019, discloses that "access to geophysical data is typically sold on a `per shoot` basis. That is, an E&P company must buy individual access to every shoot of interest." Rao does not specifically disclose that such "per shoot" basis pricing is done via *multiplying* the per item fee and *summing the product* to the subscription fee, it would have been obvious to one of ordinary skill in the art to do so. One would be motivated to find it obvious, because Rao

discloses in at least ¶0070 that "in the prior art a subscriber must typically purchase multiple licenses to access multiple shoots." In the case that a plurality of those shoots are in the same level of tiered access (See at least ¶0019 and ¶0070), purchasing multiple licenses for those accesses would result in a payment of *multiplied* product added to existing subscription fees such as broker fees.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts' data access service, with the pricing structure as taught by Rao. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claim 26, this claim encompasses substantially the same scope as claim 5. Accordingly, claim 26 is rejected in substantially the same manner as claim 5, as described above.

Claims 6-7, 10, 11, 14, 18, 28, 31, 35, 48, 58, and 69:

Coutts, as shown, discloses the following limitations:

- *(claim 6) at least one fee schedule defined by the abstract model specifies a first fee for a first type of operation and a second fee for a second type of operation; and further comprising calculating the fee to be charged based on the type of operation performed* (See at least ¶0028-¶0030)

- *(claim 7) the first type of operation is a query and the second type of operation is one of an insert and an update.* (See at least ¶0028-¶0030)

Coutts discloses, in at least ¶0028, that the system provides multiple services such as data warehousing (updating and storing) service and data sales (data brokerage) service. According to Coutts, both services have associated fees.

As per claims 10, 11, 14, 18, 28, 31, 35, 48, 58, and 69, these claims encompass substantially

the same scope as claims 6-7. Accordingly, claims 10, 11, 14, 18, 28, 31, 35, 48, 58, and 69 are

rejected in substantially the same manner as claims 6-7, as described above.

Claims 13, 30, 47, and 65:

Coutts, as shown, discloses the following limitations:

- *the physical entities are database tables* (See at least Figs 4A-4C, and ¶0087-¶0088)

As per claims 30, 47, and 65, these claims encompass substantially the same scope as claim 13.

Accordingly, claims 30, 47, and 65 are rejected in substantially the same manner as claim 13, as

described above.

Claims 20, 37, 55, 60, 63, and 73:

Coutts, as shown, discloses the following limitations:

- *each mapping rule comprises an access method for each logical field of an abstract*
  operation specification logically defining the operation accessing the data, and wherein
  each logical field describes a physical location of a physical entity (See at least Figs 4A-
  4C, and ¶0120)

Coutts discloses, in at least ¶0120, an example of fulfillment of a query request, in which "the

broker routine 76 queries the DBMS 22 to obtain the information requested, and forwards the

results of the query to the insurance company's Web browser." Here, the broker routine 76

performs a query with the input parameters, and retrieves the rest of the data that are associated

with each of the parameters. Although Coutts does not explicitly disclose that in this

querying/accessing process there is *an access method describing a physical location of a*

physical entity, it would have been obvious to one of ordinary skill in the art that when a query

software finds a data account with a matching parameter, the query software would then be

directed to the location of the rest of the data account (e.g. the database table's entire row that has the input parameter). One would be motivated to find it obvious, because in retrieving an associated data from a memory, one could efficiently do so by being directed to such data's memory location.

As per claims 37, 55, 60, 63, and 73, these claims encompass substantially the same scope as claim 20. Accordingly, claims 37, 55, 60, 63, and 73 are rejected in substantially the same manner as claim 20, as described above.

Claim 50:

Coutts, as shown, discloses the following limitations:

- *receiving, via a user interface, the abstract query comprising a plurality of query conditions, result fields and a selection of one of the model entity definitions;* (See at least ¶0117-¶0120)

- *accessing the model entity definition corresponding to the selection;* (See at least ¶0117-¶0120)

- *determining whether the model entity definition corresponding to the selection specifies one or more required result fields;* (See at least ¶0117-¶0120)

- *adding the one or more required result fields to the query upon determining that the model entity definition corresponding to the selection specifies one or more required result fields.* (See at least ¶0117-¶0120)

Coutts discloses, in at least ¶0117-¶0120, that a query would take acceptance criteria such as information relating to people having selected parameters. The selected parameter being input (e.g. gender and age) is functionally equivalent to the *"result fields."* The query also comprises a specification for pool of data accounts to query from (e.g. people living in large cities), which is functionally equivalent to *selections of one of the model entity definitions.* In the example

disclosed in ¶0117-¶0120, the required gender and age (e.g. male aged between 23 and 30) is functionally equivalent to *required result fields.*" Coutts teaches that the query would access the pool of data accounts, and the data accounts that specify the *required result fields* are added to the query's results.

3.   Claims 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coutts, in view of Rao, and further in view of Lyons et al (US 4,989,141).

Claims 51-53:

Coutts discloses the limitations of claim 46, which claim 51 depends upon. Coutts does not specifically discloses the following limitations. However, Lyons, as shown, does:

- *transforming, by the run-time component transforms and according to the abstract model, a single abstract operation specification into at least two separate physical operation specifications consistent with the physical data, wherein each physical operation specification modifies a different physical entity of the data and wherein each physical operation specifications is ordered for execution according to a physical entity relationships specification defining hierarchical relationships between the physical entities of the data.* (See at least col3:lines5-10)

Lyons, in at least the lines cited above, discloses that "the system allows for hierarchical mapping… therefore, when data is input into the data base so as to update an entry, all entities which are attached to the updated entity are also updated."

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Coutts/Rao combination's data access service, with the database updating scheme as taught by Lyons. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately. One of

ordinary skill in the art would have recognized that the results of the combination were predictable.

As per claims 52-53, these claims encompass substantially the same scope as claim 51. Accordingly, claims 52-53 are rejected in substantially the same manner as claim 51, as described above.

(10) Response to Argument

1.   With regard to the rejection of claims 70-74 under 35 U.S.C. 101, the appellant had presented the

following arguments:

> • *Claim 70 recites "displaying, via the one or more user interface screens on an <u>output</u>*
>
>   *<u>device,</u> a field-specific access fee for each of the selected fields." That is, the claim*
>
>   *recites the apparatus (i.e., the output device) on which the field-specific access fee is*
>
>   *displayed. Therefore, claim 70 is tied to a particular machine or apparatus - namely, the*
>
>   *output device - and is therefore directed to statutory subject matter. Accordingly,*
>
>   *Applicants respectfully submit that the rejection is defective and should be reversed with*
>
>   *respect to claim 70.*

The Examiner respectfully disagrees. A corollary to machine-or-transformation test is that

recitation of specific machine or particular transformation of specific article does not transform

unpatentable principle into patentable process if recited machine or transformation constitutes

mere 'insignificant post-solution activity.'" (*In re Bilski, 88 USPQ2d 1385, 1385 (Fed. Cir. 2008)*)

Examples of insignificant post-solution activity include data gathering and outputting.

Therefore, being tied to a an output device for an outputting step falls under the insignificant post-

solution activity.

2.   With regard to the rejection of claim 1-37, 46-50, and 55-74 under 35 U.S.C. 103, the Appellant

had presented the following arguments:

> • *Rao, Fig. 2; ¶ 51 (emphasis added). In other words, Rao discloses setting different prices*
>
>   *for data records 33A, 33B based on <u>information stored in a specific data field </u>(i.e., data*
>
>   *description 34B) of the data record. For example, a record storing marine seismic data*
>
>   *(e.g., storing "MARINE AREA" for the data description 34B) may incur a higher price than*
>
>   *would a record storing land seismic data (e.g., storing "LAND AREA" for the data*
>
>   *description 34B). Respectfully, Rao fails to teach setting different prices for the different*
>
>   *data fields 34A-34H. For instance, Rao does not set any price for the data description*

field 34B per se; Rao also does not set any price for the data provider & terms field 34C;

and so on. Thus, Coutts, even in view of Rao, fails to teach or suggest any fee that is

specific to a field. In this regard, the Examiner overgeneralization of the term "data type"

(i.e., to refer to different fields) is inconsistent with the actual meaning

The Examiner respectfully disagrees. As noted in the advisory action filed September 4, 2009, as

well as the grounds of rejection, the Examiner has a different interpretation of the independent

claims' "field" or "logical field." Rao, in at least ¶0028 and ¶0071, discloses that "pricing structures

can include different prices for access to different types of data," clearly teaching that as a

subscriber accesses different data of different types, each type of data would incur its own

corresponding fee in order to form the overall price to be charged to the subscriber. Therefore, in

Rao's context, a record storing marine seismic data may incur higher price than a record storing

the land seismic data, as the Appellant asserts above. Using this principle on the example of

Rao's Fig 2, Rao's data with ID GC1 (data represented by the row of 33A) and data with ID ME3

(data represented by 33B) would incur different costs, because GC1 is a marine seismic data and

ME3 is a land seismic data. What is consistent with this interpretation is that GC1 represents one

logical field of data (which corresponds to the physical body of data in the entire row of GC1) and

ME3 represents another logical field of data (which corresponds to the physical body of data in

the entire row of ME3).

In the argument above, the Appellant reasons with the fact that *"Rao does not set any price for*

the data description field 34B per se; Rao also does not set any price for the data provider &

terms field 34C; and so on." "Price for 34B" or "price for 34C" is not relevant to the Examiner's

interpretation discussed above. Again, GC1 represents one logical field of data (which

corresponds to the physical body of data in the entire row of GC1) and ME3 represents another

logical field of data (which corresponds to the physical body of data in the entire row of ME3).

According to what Rao states about how "pricing structures can include different prices for access

to different types of data," accessing GC1's data and ME3's data would incur different costs, and

that pricing relationship is what teaches the limitation *"each fee schedule for a given logical field*

defines a fee to be charged when the given logical field is involved in an abstract operation to access a physical entity corresponding to the given logical field."

3.   With regard to the rejection of claim 1-37, 46-50, and 55-74 under 35 U.S.C. 103, the Appellant had presented the following arguments:

- *Further, the Examiner mischaracterizes the claims in issue… Respectfully, what is at issue is not the orientation (rows or columns) of the data - but rather, the data that is seen as records and fields. A "field" (also referred to as a "physical field" in Applicants' Specification) is a term from the computer arts - specifically, from database nomenclature - that persons of ordinary skill in the art will be acquainted with. Persons of ordinary skill in the art will recognize that an entity (of the entity-relationship model (ERM), a well-known database modeling method) refers to a concept from the real world that has attributes and that can be modeled in a database. For example, a car has attributes such as make, model, and color. Each attribute of the entity corresponds to a field in the database. Each instance of the entity corresponds to a record in the database. For example, the concept of cars can be modeled in the database using three fields: make, model, and color. A particular car, however, can be modeled in the database using a record storing a value corresponding to each field - for example, "Ford Focus" (for the make field), "ZX4" (for the model field) and "Blue" (for the color field). Referring to Figure 2 above, it is irrelevant whether the records 33A, 33B are presented as rows (as shown) or as columns. The issue is whether Rao teaches setting prices that are specific to a field 34A-34H - and Rao simply does not. And instead of showing how Rao teaches setting prices that are specific to a field, the Examiner merely asserts that Rao teaches setting a price for accessing a given "unit of data." Respectfully, it is not a reasonable interpretation of the claims to equate both the recited physical field and the recited logical field - to a "unit of data." Those of ordinary skill in the art will recognize that a physical field is not simply a "unit of data." Instead, a physical field is database terminology that*

> *corresponds to attributes (elements 34A-34H in Fig. 2) of an entity being modeled (a data*
>
> *shoot of Rao).*
>
> - *Further, the claims recite an abstract model that includes a plurality of logical fields and*
>   *"a <u>mapping rule </u>for each of the plurality of <u>logical fields, </u>which <u>map the plurality of logical</u>*
>   *<u>fields to physical entities of the data, </u>and wherein each <u>mapping rule </u>comprises an*
>   *access method <u>which is executed to retrieve a respective physical field of the physical</u>*
>   *<u>entities of the data." </u>Respectfully, a <u>logical field </u>that retrieves a corresponding physical*
>   *field via an associated access method is not simply a "unit of data." Therefore, the*
>   *references fail to teach "each fee schedule for a given <u>logical field </u>defines a fee to be*
>   *charged when the given <u>logical field </u>is involved in an abstract operation to access a*
>   *physical entity corresponding to the given <u>logical field." </u>Accordingly, Applicants*
>   *respectfully submit that the rejection is defective and should be reversed.*

The Examiner respectfully disagrees.

The Appellant describes how one or ordinary skilled in the art would define "field" and "attribute,"

and relate it to Rao. The Examiner respectfully submits that the Appellant's assertions about

commonly known terminology have been considered. The Examiner had also noted that Rao

discloses 34A-34H using the word "field," in at least Rao's ¶0051. <u>However</u>, the Examiner is not

confined to only seeing columns 34A or 34B (and so on) as fields. Rao happened to describe

34A-34H with label "field," but one could easily look at it another way, if one interprets Rao's

database of Fig 2 as database of different data shoots involved in geophysical research.

Referring to Rao's Fig 2, a data shoot represented by GC1 could be <u>a field</u> in a database of

multiple data shoots. ME3 could be another <u>field</u> in the same database of multiple data shoots.

Also noted (with particular regard to the second bullet point above) is that the Examiner never

stated that "a logical field" is a "unit of data." In the advisory action, the Examiner clearly stated

that "logical field" is a <u>label for a unit of data.</u> In this case of Rao's Fig 2, the logical field would be

GC1 and ME3 (since they are labels for units of data), while "physical entity corresponding to the

given logical field" would be the physical content of the data in the rest of the rows represented by GC1 and ME3.

Moreover, it is noted that there is no special meaning or special definition given to "field," or "logical field" in the original specification. "'one purpose for examining the specification is to determine if the patentee has limited the scope of the claims.' ... for example, an inventor may choose to be his own lexicographer if he defines the specific terms used to describe the invention 'with reasonable clarity, deliberateness, and precision.' such a definition may appear in the written description, ..." Teleflex, Inc. v. Ficosa N. Am. Corp., 63 USPQ2d 1374, 1381 (Fed. Cir. 2002) (citations omitted). The Appellants have asserted multiple times about what is a field and how the term "field" is known in the art. However, since there is special meaning specifically defined in the specification, the Examiner's interpretation (discussed above) cannot be dismissed as long as it is a reasonable interpretation to one of ordinary skill in the art. Again, referring to Rao's Fig 2, a data shoot represented by GC1 could be a field in a database of multiple data shoots. ME3 could be another field in the same database of multiple data shoots. The Examiner believes this interpretation to be reasonable to one of ordinary skill in the art.

The Appellant had presented arguments under the premise that "*The issue is whether Rao teaches setting prices that are specific to a field 34A-34H - and Rao simply does not.*" The Examiner respectfully submits that Rao's pricing of 34A-34H is not the issue in the grounds of rejection. As noted in the preceding response, the issue is the Examiner's interpretation of the limitation that each fee schedule for a given logical field defines a fee to be charged, as well as the Examiner's interpretation of Rao's teaching. In Rao's context, a record storing marine seismic data may incur higher price than a record storing the land seismic data (Rao: "pricing structures can include different prices for access to different types of data"; ¶0028 and ¶0071) Using this principle on the example of Rao's Fig 2, Rao's data with ID GC1 (data represented by the row of 33A) and data with ID ME3 (data represented by 33B) would incur different costs, because GC1 is a marine seismic data and ME3 is a land seismic data. What is consistent with this interpretation is that GC1 represents one logical field of data (which corresponds to the physical

body of data in the entire row of GC1) and ME3 represents another logical field of data (which

corresponds to the physical body of data in the entire row of ME3).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Allen J Jung/

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